MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE. Assistant Editor: HERBERT C. HUNTER.

VOL. XXXVI. JANUARY, 1908. No. 1.

The MONTHLY WEATHER REVIEW summarizes the current manuscript data received from about 3,500 land stations in the United States and about 1,250 ocean vessels; it also gives the general results of the study of daily weather maps based on telegrams or cablegrams from about 200 North American and 40 European, Asiatic, and oceanic stations.

The hearty interest shown by all observers and correspondents is gratefully recognized.

Acknowledgment is also made of the specific cooperation of the following chiefs of independent, local, or governmental services: R. F. Stupart, Esq., Director of the Meteorological Service of the Dominion of Canada; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. I. S. Kimball, General Superintendent of the United States Life-Saving Service; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Director Meteorological Office, London; Maxwell Hall, Esq., Government Meteorologist, Kingston, Jamaica; Rev. L. Gangoiti, Director of the Meteorological Observatory of Belen College, Havana, Cuba; Luiz G. Carbonell, Director, Meteorological Service of Cuba, Havana, Cuba; Rev. José Algué, S. J., Director of the Weather Bureau, Manila Central Observatory, Philippines; Maj. Gen. M. A. Rykachef, Director of the Physical Central Observatory, St. Petersburg, Russia; Carl Ryder, Director, Danish Meteorological Institute, Copenhagen, Denmark.

As far as practicable the time of the seventy-fifth meridian is used in the text of the MONTHLY WEATHER REVIEW.

Barometric pressures, both at land stations and on ocean vessels, whether station pressures or sea-level pressures, are reduced, or assumed to be reduced, to standard gravity, as well as corrected for all instrumental peculiarities, so that they express pressure in the standard international system of measures, namely, by the height of an equivalent column of mercury at 32° Fahrenheit, under the standard force, i. e., apparent gravity at sea level and latitude 45°.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

IN GENERAL.

Winter barometric pressure was not maintained in the continental high areas. Over the interior of Asia the barometer was highest on the 4–5th and 15–16th, when it rose above 31.00 inches, and was low the 1st, 10th, 18th, and 28th. Accompanying periods of high pressure in the Asiatic area the barometer was low over Bering Sea, and closely following periods of low pressure over Asia the barometer rose above normal over Bering Sea and fell below normal over the Hawaiian Islands. These alternations in pressure had a relation to the order and succession of weather changes over the North American Continent. In the United States and Canada periods of cold, fair weather followed marked rises in pressure over Bering Sea, and depressions of the barometer over Bering Sea were closely followed over the North American Continent by periods of warm, rainy weather. Falls in the barometer over the Hawaiian Islands occurred about two days later than the rises over Bering Sea, and vice versa, depressions over Bering Sea were attended by high barometric pressure over the Hawaiian Islands. A similar association was shown between Atlantic and European pressures and weather changes. Over the Atlantic Ocean there was usually a reversal of barometric changes in northern as compared with southern latitudes, and at times when the pressure was high in the Iceland area the barometer ranged low over the middle and southern European continental area. From the 1st to 4th and 9th to 14th pressure was low over southwestern Europe and wintry weather prevailed over western and northwestern Europe.

Two severe storms occurred during the first decade of the month. The first of these advanced from British Columbia to the region of the White Sea from the 1st to 12th. This storm acquired marked intensity over the eastern portion of the United States on the 4th and 5th, and reached the British Isles on the 8th, with reported pressure below 29.00 inches. During the next two days the center of disturbance moved southeastward to the neighborhood of the Black Sea and, recurving thence northward, disappeared in the direction of the White Sea after the 11th. The storms that attended this depression from the 4th to the 9th, on land and sea, were very severe. The second storm of this decade was exceptionally severe over the eastern portion of the United States. It apparently advanced from the Pacific over lower California during the 2d and 3d. From the 4th to the 7th a barometric depression that was probably a continuation of this storm moved eastward, passing along the Gulf coast on the 6th, and reaching the south Atlantic coast the morning of the 7th. During the succeeding twenty-four hours the storm center moved northward, with pressure below 29.00 inches, and united over the St. Lawrence Valley with a depression that had moved eastward over British America. During the 7th and 8th heavy gales prevailed on the Atlantic coast and over the eastern Lake region. From the 9th to 12th this storm moved over the Atlantic north of the trans-Atlantic steamer tracks and disappeared beyond the region of observation north of the British Isles.

From the 9th to 13th a depression moved from the southern Rocky Mountain region northeastward over the lower Lakes and Canadian Maritime Provinces, attended by heavy rain in the south and east, by a severe storm of snow and sleet in parts of the Lake region, and by gales on the Gulf, western Cuban, and Atlantic coasts, and on the Great Lakes. During the next three days this depression moved northeastward over the Atlantic and disappeared in the direction of the Norwegian coast. From the 18th to the 22d a depression that may have been a continuation of the one just noted occupied northern European Russia.

From the 13th to the 17th a disturbance of moderate strength past from the north Pacific coast to Newfoundland. Following this disturbance the first cold wave of the month visited the country generally east of the Rocky Mountains, and carried the line of heavy frost into central Florida.

On the 19th the severest storm of the present season visited the north Pacific coast. At North Head and Tatoosh, Wash., wind velocities of 84 and 76 miles, respectively, were regis-